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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,966	03/06/2001	Richard Lauder	41962/DBP/C664	2155
23363	7590	05/17/2005	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			SEDIGHIAN, REZA	
PO BOX 7068			ART UNIT	
PASADENA, CA 91109-7068			PAPER NUMBER	
			2633	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/800,966	LAUDER ET AL.	
	Examiner	Art Unit	
	M. R. Sedighian	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-23 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 12 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 4, 11, 13, 14 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2/25/05</u> . | 6) <input type="checkbox"/> Other: _____ |

1. This communication is responsive to applicant's 2/14/05 amendments in the application of Richard Lauder et al. filed 3/6/01. The amendments have been entered. Claims 1-23 are now pending.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Morita (US Patent No: 6,498,664).

Regarding claim 15, Morita teaches a method for connecting network elements (62, 63, 64, 65, fig. 5) of a first WDM network (61, fig. 5) supporting at least a first bit rate WDM data stream having a first bit rate (622.08 Mb/s) to other network elements (72, 73, fig. 5) on a second optical network (71, fig. 5) supporting at least a second bit rate data stream having a second bit rate (2488.32 Mb/s), the second bit rate being substantially a multiple n of the first bit rate (2488.32 Mb/s); the method comprising the step of selectively multiplexing (66, fig. 5) any n first WDM data streams (STM-M #1, STM-M #2, STM-M #3, STM-M #4) originating from one or more of the network elements (62, 63, 64, 65, fig. 5) of the first WDM network (61, fig. 5) destined for any same one of the other network elements (72, 73, fig. 5) into one of the second data stream (2488.32 Mb/s).

Regarding claim 17, Morita further teaches demultiplexing (73, fig. 5) an incoming second data stream (2488.32 Mb/s) from the second network into n outgoing first WDM data stream (STM-M #1, STM-M #2, STM-M #3, STM-M # 4) destined for one or more network elements (78, 79, 80, 81, fig. 5).

4. Claims 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Murata (US Patent No: 6,654,562).

Regarding claim 15, Murata teaches a method for connecting network elements (25, 26, 27, fig. 5) of a first WDM network (21, fig. 5) supporting at least a first bit rate WDM data stream having a first bit rate (STM-1 signal of 155.52 Mb/s) to other network elements (32, 33, 34, fig. 5) on a second optical network (22, fig. 5) supporting at least a second bit rate data stream having a second bit rate (STM-4 of bit rate 622.08 Mb/s), the second bit rate being substantially a multiple n of the first bit rate (col. 8, lines 35-44); the method comprising the step of selectively multiplexing (28, fig. 5) any n first WDM data streams (CH1, CH2, fig. 5) originating from one or more of the network elements (24, 25, 26, 27, fig. 5) of the first WDM network (21, fig. 5) destined (23, fig. 5) for any same one of the other network elements (31, 32, 33, 34, fig. 5) into one of the second data stream (col. 8, lines 40-41).

Regarding claim 17, Murata further teaches demultiplexing (31, fig. 5) an incoming second data stream (the 622.08 Mb/s STM-4 signal) from the second network (22, fig. 5) into n outgoing first WDM data stream (35, CH1, CH2, ..., CHK, fig. 5) destined for one or more network elements (32, 33, 34, fig. 5).

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 7-8, 10, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761) in view of Okayama et al. (US Patent No: 5,086,349), or Tsushima et al. (US Patent No: 5,600,466).

Regarding claims 1 and 15, Fee discloses a network hub structure (100, fig. 1) for connecting network elements of a first WDM network (136a, 136b, 136c, fig. 1) supporting a first bit rate WDM data stream (col. 4, line 10) to other network elements on a second optical network (136d, 136e, 136f, fig. 1) supporting a second bit rate data stream (col. 4, lines 7-12), comprising: a multiplexing system (100, fig. 1) comprising a plurality of combining units (130a, 130b, 130c, fig. 1) each combining unit is being arranged to combine n first WDM data streams (112a, 112b, 112c, fig. 1) into one second data stream (col. 4, lines 45-50, note that a combined signal is transmitted over fiber 106a), and a switching unit (108a, fig. 1) is arranged to selectively cross connect (col. 4, lines 20-21) any n first WDM data streams originating from one or more of the network elements (the data streams that are routed from combiners 134a, 134b, and 134c of fig. 1) of the first WDM destined for any one of the other network elements (col. 4, lines 7-10, 20-26, note that data signals are routed from the first network 136a to a second network 136d through line 106a). Fee differs from the claimed invention in that Fee does not specifically disclose the second bit rate data stream is a multiple n of the first bit rate. Fee discloses the optical network (100, fig. 1) comprises of digital cross connects switches DCCSs

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for switching, routing, multiplexing and demultiplexing electrical signals into higher or lower bit rates (col. 4, lines 7-10). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention that an electro-optical data transmission system such as the one of Fee can provide a second data stream with a second bit rate that is in multiple n of first bit rate of a first data stream in order to transmit a plurality of different data signals and to provide a data transmission system in compliant with SONET standards. Fee further differs from the claimed invention in that Fee does not specifically disclose the combiners are multiplexers. However, Okayama teaches a combining means (28, fig. 2) that combines and multiplexes a plurality of signal beams (col. 4, lines 15-18). Likewise, Tsushima teaches a combiner (26, fig. 2b) that is a wavelength multiplexer (col. 13, lines 23-25). Therefore, it would have been obvious to an artisan at the time of invention to incorporate optical wavelength combiner/multiplexer, such as the ones disclosed by Okayama or Tsushima for the optical combiners in the optical data transmission system of Fee in order to multiplex the different optical data signals.

Regarding claims 3 and 17, Fee discloses demultiplexing an incoming second data stream from the second network into n outgoing first WDM stream destined for the network element on the first WDM network (note that optical signals that are received by splitters 134d, 134e, and 134f are further demultiplexed and routed to output ports 140b for further transmission to elements of the first network).

Regarding claim 7, Fee teaches the network further comprises a redundant switching unit (108b, fig. 1) for fault protection in case of fault in the primary switching unit (col. 3, lines 15-62).

Regarding claim 8, Fee discloses the second network is a second WDM network (col. 5, lines 32-38).

Regarding claim 10, Fee discloses each multiplexing unit may comprise a SONET multiplexer unit (col. 4, lines 7-12).

7. Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761) in view of Okayama et al. (US Patent No: 5,086,349), or Tsushima et al. (US Patent No: 5,600,466) and in further view of Olshansky et al. (US Patent No: 5,418,785).

Regarding claims 2 and 16, the modified optical communication system of Fee and Okayama or Tsushima differs from the claimed invention in that Fee and Okayama or Tsushima do not disclose a first bit rate of 1 Gbit/s and second bit rate of 2.488 Gbit/s data streams. Olshansky teaches data bits rates of 1 Gbit/s and 2.488 Gbit/s (col. 8, lines 63-68, col. 9, lines 1-10). As it is taught by Olshansky, it would have been obvious to an artisan at the time of invention to transmit data of different rates such as of 1 Gbit/s, or 1.25 Gbit/s, or 2.488 Gbit/s, by the modified electro-optical data transmission system of Fee and Okayama or Tsushima in order to transmit a plurality of different data signals.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761) in view of Okayama et al. (US Patent No: 5,086,349), or Tsushima et al. (US Patent No: 5,600,466) and in further view of Verthein et al. (US Patent No: 6,249,527).

Regarding claim 5, the modified optical communication system of Fee and Okayama or Tsushima differs from the claimed invention in that Fee and Okayama or Tsushima do not

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disclose the multiplexing unit is incorporated in a Line Interface Card. Verthein teaches a multiplexing unit that is incorporated in a Line Interface Card (col. 4, lines 9-13). Therefore, it would have been obvious to an artisan at the time of invention to incorporate the modified multiplexing units of Fee in line Interface cards, as it is taught by Verthein, in order to selectively connect or assign multiplexers to different transmission lines.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761) in view of Okayama et al. (US Patent No: 5,086,349), or Tsushima et al. (US Patent No: 5,600,466) and in further view of Parrish et al. (US Patent No: 6,550,016).

Regarding claim 6, the modified communication system of Fee and Okayama or Tsushima differs from the claimed invention in that Fee and Okayama or Tsushima do not disclose a plurality of Trunk Interface Cards. It is known that Trunk interface cards can be incorporated in data transmission system to convert optical signals into electrical signals or vice-versa. Parrish teaches a plurality of Trunk Interface Cards (col. 4, lines 20-25 and 30, 32, 34, 36, fig. 2). Therefore, it would have been obvious to an artisan at the time of invention to incorporate Trunk Interface Cards, as it is taught by Parrish in the modified electro-optical data transmission system of Fee and Okayama or Tsushima in order to convert the WDM optical signals into electrical signals or to convert electrical signals into optical signal.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fee (US patent No: 5,777,761) in view of Okayama et al. (US Patent No: 5,086,349), or Tsushima et al. (US Patent No: 5,600,466) and in further view of Dempsey (US Patent No: 6,526,021).

Regarding claim 9, the modified optical communication system of Fee and Okayama or Tsushima differs from the claimed invention in that Fee and Okayama or Tsushima do not disclose each multiplexing unit comprises a 2xGbE/OC48 Packet over SONET multiplexer unit. Dempsey discloses an OC48 multiplexer unit (140, fig. 3 and col. 6, lines 12-15). Therefore, it would have been obvious to an artisan at the time of invention to incorporate a plurality of OC48 multiplexer units such as the one of Dempsey for each respective combiner/multiplexer unit in the modified electro-optical data transmission system of Fee and Okayama or Tsushima in order to multiplex and map different OC48 data streams.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morita (US Patent No: 6,498,664) in view of Olshansky et al. (US Patent No: 5,418,785).

Regarding claim 16, the optical communication system of Morita differs from the claimed invention in that Morita does not disclose a first bit rate of 1 Gbit/s and second bit rate of 2.488 Gbit/s data streams. Olshansky teaches data bits rates of 1 Gbit/s and 2.488 Gbit/s (col. 8, lines 63-68, col. 9, lines 1-10). As it is taught by Olshansky, it would have been obvious to an artisan at the time of invention to transmit data of different rates such as of 1 Gbit/s, or 1.25 Gbit/s, or 2.488 Gbit/s, by the optical data transmission system of Morita in order to transmit a plurality of different data signals.

12. Claims 4, 11, 13, 14, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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13. Claims 19-23 are allowed.

14. Applicant's arguments filed on 2/14/05 have been fully considered but they are not persuasive.

Remark states Fee does not teach the units 130a, 130b, and 130c of fig. 1 are combiners and the combiners are not capable of performing the functionality of multiplexing units. References of Okayama and Tsushima each shows that an optical combiner can combine and multiplex optical signals, as discussed above in claim 1. Remark further states combiners 130a, 130b, and 130c of Fee combine optical signals of different wavelengths for propagation along one signal path without any changes to the individual optical signal bit rates, or in another word, there will never be a change in bit rate between signals entering and leaving the combiners 130a, 130b, and 130c. However, claims 1 and 15, each respectively recites optical data communication between a first network of a first bit rate and a second network of a second bit rate, wherein the second bit rate is a multiple n of the first bit rate. Fee teaches such concept by describing that the optical network 100 comprises two digital cross-connects switches 110a, b, for switching, routing, multiplexing, and demultiplexing electrical signals into a higher or lower bit rates (col. 4, lines 7-10). Accordingly, in such system electrical signals entering to the system can have a lower bit rate (for example, a first bit rate) and the output signals outputted by the system can have a higher bit rate, multiple of the first bit rate (for example, the output signal from the combiners, or multiplexers, or the switches can have a higher bit rate, or a second bit rate, that is multiple n of the first bit rate).

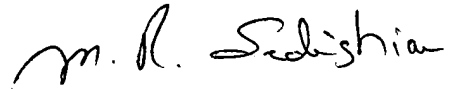
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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034.

The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


M. R. SEDIGHIAN
PRIMARY EXAMINER